

Application/Control Number : 10/815,743
Art Unit: 2837
October 28, 2005
Page 3

Claim Amendments:

Add the new claim 14 as follows:

1. (previously presented) A synchronization device for at least two windshield wipers, of the type that comprises:

at least two wipers, each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions;

means for activating/deactivating said motor/gearmotor;

means for signaling the transit and direction of transit of each one of said blades through a preset reference position;

means for controlling the signals and driving said activation/deactivation means;

said synchronization device also comprising:

means for determining, at each wipe, the wiping time for each one of said wipers;

means for measuring, at each wipe, and in relation to the transit of said at least two wipers at the respective means for signaling transit and direction of transit, the lead time error of each one of the at least one wiper that is faster with respect to the slower wiper of said at least two wipers;

means for calculating, at each wipe, a correction time in order to reduce said lead error of each one of said at least one faster wiper such that each correction time is a function of said corresponding lead error;

means for identifying, at each wipe, said slower wiper;

Application/Control Number : 10/815,743
Art Unit: 2837
October 28, 2005
Page 4

means for applying, at each wipe, each one of said correction times to said corresponding motor/gearmotor of each one of said at least one faster wiper which interrupt/reduce power of the corresponding motor/gearmotor and reduce the corresponding lead time error to as close as possible to zero.

2. (original) The device of claim 1, wherein said means for controlling the signals and for driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for measuring said lead error, said means for calculating said correction time and said means for identifying, at each wipe, the slower wiper are integrated in a single system for synchronization control and management.

3. (previously presented) The device of claim 1, wherein each wiper with the corresponding means for applying the correction time is connected, by means of an interface, to a communications bus, which in turn is functionally connected to a remote control system.

4. (original) The device of claim 1, wherein each wiper with the corresponding means for applying the correction time is functionally connected to a remote control system by means of an optical or radio link.

Application/Control Number : 10/815,743
Art Unit: 2837
October 28, 2005
Page 5

5. (original) The device of claim 3, wherein said remote control system contains said means for controlling the signals and driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for identifying, at each wipe, the slower wiper, said means for measuring the lead time error of the at least one faster wiper with respect to said slower wiper, and said means for calculating a correction time in order to reduce said lead error of each one of said at least one faster wiper.

6. (original) The device of claim 1, wherein said means for applying said correction times are constituted by said activation/deactivation means.

7. (original) The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said blades through a preset reference position are constituted by a proximity switch for each one of said wipers, said proximity switch being adapted to emit a synchronization signal.

8. (original) The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said wipers for a preset reference position are constituted by an automatic parking switch for each one of said wipers, said automatic parking switch being adapted to emit a synchronization signal.

Application/Control Number : 10/815,743
Art Unit: 2837
October 28, 2005
Page 6

9. (previously presented) The device of claim 1, wherein said means for applying said correction time are constituted, for each one of said gearmotors, by a switch that removes power completely from the corresponding gearmotor.

10. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said correction time, said means for applying said correction time are constituted, for each one of said gearmotors, by at least two switches in a parallel configuration, which reduce the power supply of the corresponding gearmotor.

11. (original) The device of claim 1, wherein said electric motor/gearmotor is of the two-speed type.

12. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said correction time, said means for applying said correction time are constituted, for each one of said gearmotors, by two switches in a parallel configuration, which select the rotation rate.

13. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said correction time, said means for applying said

Application/Control Number : 10/815,743
Art Unit: 2837
October 28, 2005
Page 7

correction time are constituted, for each one of said gearmotors, by two switches in a series configuration, a first switch which activates/deactivates said motor/gearmotor, a second switch which selects the speed.

14. (new) A synchronization device for at least two windshield wipers, of the type that comprises:

at least two wipers, each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions;

means for activating/deactivating said motor/gearmotor;

means for signaling the transit and direction of transit of each one of said blades through a preset reference position;

means for controlling the signals and driving said activation/deactivation means;

said synchronization device also comprising:

means for determining, at each wipe, the wiping time for each one of said wipers;

means for measuring, at each wipe, and in relation to the transit of said at least two wipers at the respective means for signaling transit and direction of transit, the lead time error of each one of the at least one wiper that is faster with respect to the slower wiper of said at least two wipers;

Application/Control Number : 10/815,743

Art Unit: 2837

October 28, 2005

Page 8

means for calculating, at each wipe, a correction time in order to reduce said lead error of each one of said at least one faster wiper such that each correction time is a function of said corresponding lead error;

means for identifying, at each wipe, said slower wiper;

means for applying, at each wipe, each one of said correction times to said motor/gearmotor to reduce said lead time error.